



BILLING CODE 8120-08-P

## TENNESSEE VALLEY AUTHORITY

### Supplemental Environmental Impact Statement – Integrated Resource Plan

AGENCY: Tennessee Valley Authority.

ACTION: Notice of Intent.

SUMMARY: The Tennessee Valley Authority (TVA) is conducting a study of its energy resources in order to update and replace the integrated Resource Plan (IRP) and the associated Environmental Impact Statement (EIS) that it completed in 2011. The IRP is a comprehensive study of how TVA will meet the demand for electricity in its service territory over the next 20 years. The 2011 IRP is being updated in response to major changes in electrical utility industry trends since 2011. As part of the study, TVA intends to prepare a programmatic Supplemental EIS to assess the impacts associated with the implementation of the updated IRP. TVA will use the EIS process to elicit and prioritize the values and concerns of stakeholders; identify issues, trends, events, and tradeoffs affecting TVA's policies; formulate, evaluate and compare alternative portfolios of energy resource options; provide opportunities for public review and comment; and ensure that TVA's evaluation of alternative energy resource strategies reflects a full range of stakeholder input. Public comment is invited concerning

both the scope of the Supplemental EIS and environmental issues that should be addressed as a part of this Supplemental EIS.

DATES: Comments on the scope of the EIS must be received on or before November 22, 2013. To facilitate the scoping process, TVA will hold public scoping meetings; see <http://www.tva.gov/irp> for more information on the meetings.

ADDRESSES: Written comments should be sent to Charles P. Nicholson, Tennessee Valley Authority, 400 West Summit Hill Drive, WT 11D, Knoxville, Tennessee 37902. Comments also may be submitted on the project Web site at <http://www.tva.gov/irp>, or by email at [IRP@tva.gov](mailto:IRP@tva.gov).

#### FOR FURTHER INFORMATION CONTACT:

For general information on the NEPA process, contact Mr. Nicholson at the address above, by email at [cpnicholson@tva.gov](mailto:cpnicholson@tva.gov), or by phone at 865-632-3582.

For general information on the IRP process, contact Gary Brinkworth, Tennessee Valley Authority, 1101 Market Street, MR 3K-C, Chattanooga, Tennessee 37401, or email at [gsbrinkworth@tva.gov](mailto:gsbrinkworth@tva.gov).

SUPPLEMENTARY INFORMATION: This notice is provided in accordance with the Council on Environmental Quality's Regulations (40 CFR parts 1500 to 1508) and TVA's procedures for implementing the National Environmental Policy Act (NEPA).

TVA is an agency and instrumentality of the United States, established by an act of Congress in 1933, to foster the social and economic welfare of the people of the Tennessee Valley region and to promote the proper use and conservation of the region's natural resources. One component of this mission is the generation, transmission, and sale of reliable and affordable electric energy.

### **TVA Power System**

TVA operates the nation's largest public power system, producing 4 percent of all the electricity in the nation. TVA provides electricity to most of Tennessee and parts of Virginia, North Carolina, Georgia, Alabama, Mississippi, and Kentucky. It serves about 9 million people in this seven-state region through 155 power distributors and 57 directly served large industries and federal facilities. The TVA Act requires the TVA power system to be self-supporting and operated on a nonprofit basis and directs TVA to sell power at rates as low as are feasible.

Dependable net summer capacity on the TVA power system is approximately 36,580 megawatts. TVA generates most of the power it distributes with 3 nuclear plants, 10 coal-fired plants, 9 simple-cycle combustion turbine plants, 5 combined-cycle combustion turbine plants, 29 hydroelectric dams, a pumped-storage facility, a methane-gas cofiring facility, a diesel-fired facility, and several small solar photovoltaic facilities. A portion of delivered power is provided through long-term power purchase agreements. About 41 percent of TVA's recent annual generation is from coal; 38 percent is from

nuclear; 12 percent from natural gas; and the remainder is from hydro and other renewable energy resources. TVA transmits electricity from these facilities over 16,000 circuit miles of transmission lines. Like other utility systems, TVA has power interchange agreements with utilities surrounding its region and purchases and sells power on an economy basis almost daily.

### **Resource Planning Activities**

In April 2011, TVA completed the Integrated Resource Plan – TVA's Environmental and Energy Future and associated Final EIS. These documents, developed with extensive public involvement, evaluated six alternative energy resource strategies which differed in the amount of purchased power, energy efficiency and demand response efforts, renewable energy resources, nuclear generating capacity additions, and coal-fired generation. The alternative strategies were analyzed in the context of eight different scenarios which described plausible future economic, financial, regulatory and legislated conditions, as well as social trends and adoption of technological innovations. Potential 20-year energy resource plans or portfolios were developed for each combination of strategy and scenario using a capacity planning model. The portfolios were ranked by several metrics including revenue requirements, short-term system average rates, financial risk, carbon dioxide emissions, thermal cooling requirements, waste handling costs, and changes in total employment and personal income. The strategy selected to guide planning activities, Strategy R – Recommended Planning Direction, consisted of a range of additions by resource type that reflected an optimized mix of diversified energy resources that

would be added to the TVA power system under a variety of plausible futures. This strategy will be the baseline for the evaluations conducted as part of this new IRP and EIS process.

The major components of the implemented 2011 IRP strategy included 3,600 to 5,100 MW of energy efficiency and demand response by 2020; 1,500 to 2,500 MW of cost effective renewable energy additions by 2020; idling of 2,400 to 4,700 MW of coal capacity by 2017; 850 MW of new pumped storage capacity in 2020-2024; 1,150 to 5,900 MW of new nuclear capacity in 2013-2029; and 900 to 9,300 MW of new natural gas capacity in 2012-2029.

Since 2011, several dramatic changes, both industry-wide and TVA-specific, have led TVA to begin development of the new IRP and associated Supplemental EIS ahead of the 5-year cycle identified in the 2011 IRP. Natural gas supplies have become abundant and available at lower cost. Electricity demand growth has been lower than forecast and, for TVA, has decreased since 2011. Additional TVA-specific changes to underlying assumptions used in the 2011 IRP study include: the delay in the startup of the first nuclear capacity addition, Watts Bar Unit 2, from 2013 to 2015; the delay of the startup of the next nuclear addition, Bellefonte Unit 1, beyond the early date of 2018; and the postponement of planning studies for new pumped storage capacity, with eventual startup delayed beyond the 2020 early date.

### **Proposed Issues To Be Addressed**

Based on both internal and external stakeholder discussions, TVA anticipates that the major issues to be addressed in the IRP Supplemental EIS will be the cost and reliability of power, the effects of power production on the environment, including climate change, the effects of climate change on the Valley, the availability and use of renewable power resources, the effectiveness and implementation of demand side management options, including energy efficiency, handling waste and byproducts of TVA's power operations, and the relationship of the economy to all of these activities. Generic resource options will be the primary focus of the Supplemental EIS. TVA also anticipates a more robust evaluation of electrical transmission system additions and upgrades necessary to transmit power from TVA generating facilities and from facilities outside the TVA region.

Because of the programmatic nature of this study, TVA anticipates that the environmental effects which are examined will primarily be those at a regional level with some extending to a national or global level. This would include such potential environmental effects and issues as emissions of greenhouse gases, air quality, water quality and quantity, waste generation and disposal, and ecological and cultural resources. Socioeconomic impacts within the region that may result from alternative energy strategies will also be considered. The more site-specific effects will not be addressed in detail and would be addressed in later tiered assessments of specific implementing activities.

This list of issues is preliminary and is intended to facilitate public comment on the scope of this Supplemental EIS. TVA invites suggestions

concerning the list of issues which should be addressed. TVA also invites specific comments on the questions that will begin to be answered by IRP:

- Should the current power generation mix (e.g., coal, nuclear power, natural gas, hydro, renewables) change? If so, how?
- Should renewable power be available and added in the Valley at a significant scale? If so, how?
- How should energy efficiency and demand response be considered in planning for future energy needs and how can TVA directly affect electricity usage by consumers?
- And how will all of this affect reliability and the price we pay for electricity?

### **Analytical Approach**

TVA anticipates using an analytical approach similar to that of the 2011 IRP/EIS described above. The number of alternative energy resource strategies and scenarios to be evaluated may differ from the 2011 IRP/EIS and will be determined after the completion of scoping. The IRP planning period is 20 years.

### **Scoping Process**

Scoping, which is integral to the process for implementing NEPA, provides an early and open process to ensure that (1) issues are identified early and properly studied; (2) issues of little significance do not consume substantial time and

effort; (3) the draft EIS is thorough and balanced; and (4) delays caused by an inadequate EIS are avoided.

With the help of the public, TVA will identify the most effective energy resource strategy that will meet TVA's mission and serve the people of the Valley for the next 20 years. To ensure that the full range of issues and a comprehensive portfolio of energy resources are addressed, TVA invites members of the public as well as federal, state, and local agencies and Indian tribes to comment on the scope of the IRP EIS. As part of the EIS process, TVA anticipates asking representatives from key stakeholder groups to participate in a public review group which will meet several times over the course of the study to learn about the issues, discuss tradeoffs associated with different resource options, and assist TVA in developing an optimal energy resource strategy.

Comments on the scope of this Supplemental EIS should be submitted no later than the date given under the DATES section of this notice. Any comments received, including names and addresses, will become part of the administrative record and will be available for public inspection.

After consideration of the comments received during this scoping period, TVA will develop and distribute a document which will summarize public and agency comments that were received and identify the issues and alternatives to be addressed in the Supplemental EIS and identify the schedule for completing the EIS process. Following analysis of the issues, TVA will prepare a draft EIS for public review and comment. Notice of availability of the draft EIS will be

published by the U.S. Environmental Protection Agency in the Federal Register.

TVA will solicit comments on the draft IRP and Supplemental EIS and hold public meetings to address it. TVA expects to release the draft IRP and Supplemental EIS in late 2014. The final IRP and Supplemental EIS, along with the Record of Decision, will be issued in 2015.

Dated: October 23, 2013.

Brenda E. Brickhouse,

Vice President, Environment.

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